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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/759,010 | 01/20/2004 | Naoyuki Kayukawa | 118362 | 6828 |
| 25944 | 7590 | 04/11/2005 | EXAMINER | |
| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | MULLINS, BURTON S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2834 | |

DATE MAILED: 04/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/759,010

Applicant(s)

KAYUKAWA ET AL.

Examiner

Burton S. Mullins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☒ Claim(s) 1-3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 21 June 2004 has been considered by the examiner. However, the references pertain to satellite technology and have no perceivable relation to coal-powered MDH power generation methods claimed in the application; therefore, the examiner has crossed out the references. Applicant is requested to review the references and provide an explanation of relevance should he desire the references to be printed on the face of the issued patent.

Specification

3. The disclosure is objected to because of the following informalities. On p.3, lines 1 and 21, change “with” to –by—. On lines 24 and 29, “coming from the downstream” and “in the downstream” are not idiomatic. On line 26, insert ---and--- before “an”.

On p.4, line 2, change “processes” to –process--.

On p.5, line 29, the phrase “becomes far beyond” is not idiomatic.

On p.6, line 11, “followings” is not idiomatic.

On p.7, lines 1-2, the phrases “The gas of which temperature is dropped to...” and “is equal to the amount of which combustion heat is equal to the heat input...” are not idiomatic.

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On p.8, line 21, change “researches” to —research--- and on line 22 change “are” to —is--.

On line 34, insert ---being--- before “carried”.

On p. 9, line 3, change “it is the process having” to ---the process has---. On line 17, “newly assumed” is not idiomatic. On line 19, change “firstly” to —first--.

On p.10, lines 26-27, the phrases “with increasing the economical predominance” and “there is no case that” are not idiomatic.

On p.11, lines 13-14 and 20-21, “As effects...it is possible to result in progresses...” and “As social and environmental effects, it is possible...” are not idiomatic. On line 16, replace “As” with ---From--- and change “economical” to —economic--. On line 20, delete the first recitation of “efficiency”. The sentence on lines 21-25 is not idiomatic and grammatically improper.

Appropriate correction is required.

Claim Objections

4. Claims 1-3 are objected to because of the following informalities: In claims 1 and 2, line 1, delete second recitation of “a”. In claim 1, lines 10 and 14, replace “said exhaust gas through” with ---the exhaust gas from— in order to avoid indefiniteness of “said exhaust gas”. In claim 3, line 3, change “be mixed” to ---mixing---. Appropriate correction is required.

Allowable Subject Matter

5. Claims 1-3 are allowed pending correction of minor informalities noted above.

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The following is an examiner's statement of reasons for allowance: The prior art MDH power generators and methods do not teach or suggest, inter alia, an iodine-sulfur reaction step in which the waste heat of the exhaust gas from a fuel pre-heater is converted into hydrogen chemical energy by iodine-sulfur reactions.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. This application is in condition for allowance except for the formal matters noted above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 571-272-2029.

The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm
06 April 2005